MISSISSIPPI CRIME LABORATORY

ASCLD/LAB Accredited since 2003

Lab Case #: 14-003509-0012

TRACE EVIDENCE (JACKSON) Report

Main Laboratory

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October 08, 2014

Demarcus Wilburn
MERIDIAN POLICE DEPT
510 22nd Avenue South
Meridian, MS 39301
601-485-1859
REFERENCE- Agency Case # 1-14-008628

VICTIM: Christian Andreacchio
SUSPECT: Whitley Alexis Goodman
SUSPECT: Dylan Swearinger

REQUEST FOR ANALYSIS

On 9/16/2014 it was requested that the TRACE EVIDENCE (JACKSON) section perform the following analysis: Gunshot Residue Examination (J). This examination was completed on 10/8/2014.

Examine the clothing in Submission 008 for the presence of gunshot residue.

EVIDENCE

On 9/16/2014 at 12:04 PM, Forensic Scientist Marie Pace received the following evidence from the MERIDIAN POLICE DEPT via Alisha Kirby:

Evidence Submission 008	One tape sealed paper bag labeled "Case No. 1-14-008628 . . . Description and/or Location: Grey coat from Whitley Goodman."

RESULTS & CONCLUSIONS

Examinations Performed: Scanning Electron Microscopy with Energy Dispersive X-ray Analysis

No particles of gunshot residue were identified on the adhesive tape lifts 008-A1(Grey Coat Right Sleeve) or 008-A2(Grey Coat Left Sleeve) taken from the grey coat contained in Submission 008("Case No. 1-14-008628...Description and/or Location: Grey coat from Whitley Goodman.").

REMARKS

CONT'D:

Gunshot residue examinations are conducted when a question arises as to whether a person has been in the environment of a discharged weapon.

The gunshot residue which is tested for at the Mississippi Crime Laboratory is produced from components of the ammunition during the process of discharging the weapon. The main elemental components of the particles are produced from the primer composition and these include Lead, Barium and Antimony.

At the time of discharge, elemental components are vaporized to a gaseous state and forced from any openings in the weapon. Upon exiting the weapon and being exposed to the cooler air, these gaseous vapors condense back to solid particles which will normally have a spherical morphology.

Normally, gunshot residue samples are collected from the hands of persons suspected of being in the environment of a discharged weapon. These samples are collected by using an aluminum stub covered with adhesive tape. The adhesive area of the stub is gently pressed to the area being sampled in order to remove any microscopic particles which may be present.

When these samples are submitted to the Mississippi Crime Laboratory, they are examined using a Scanning Electron Microscope with an Energy Dispersive X-Ray Analyzer. This instrument allows the examiner to search for microscopic particles with the characteristic particle morphology and elemental composition necessary to identify those particles as gunshot residue.

The identification of gunshot residue particles on samples from an individual indicates that person has been in the environment of a discharged weapon. (Either by firing the weapon, handling a weapon or object with gunshot residue on its surface or being in close proximity to a weapon at time of discharge.)

Several environmental factors can effect the ability to detect and identify gunshot residue particles. These include:

1. Type of Weapon
2. Type of Ammunition
3. Time Lapse between discharge of weapon and time of collection.
4. Activity of the subject between time of shooting and time of collection.
5. Collection Technique

Because of factors listed above, the lack of gunshot residue on samples does not preclude the possibility that the person has been in the environment of a discharged weapon.

Case Analyst:

Chad Suggs, D-ABC
Forensic Scientist

Technical Reviewer:

David Whitehead, D-ABC
Section Chief - Trace Evidence

CC:

iResults DA - 10th Judicial District

DFW